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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/896,537	06/30/2001	Gary Graunke	42390P11149	8408

7590

08/01/2005

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EXAMINER

LANIER, BENJAMIN E

ART UNIT

PAPER NUMBER

2132

DATE MAILED: 08/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/896,537

Applicant(s)

GRAUNKE ET AL.

Examiner

Benjamin E Lanier

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 30 June 2005 have been fully considered but they are not persuasive. Applicant's argument that Eyer does not disclose data that has one or more levels of access is not persuasive because Eyer deals with the access control of electronic signals in the form of television signals. Eyer discloses that the television signals have subscription and premium services (Col. 1, lines 14-30), which would correspond to the different levels of access. For example the base level of access would be your run of the mill basic cable, and the maximum level of access, which corresponds to N of the claims, would be access to all channels that the television provider has available. Element M of the claims would correspond to some point in between, which could be basic cable plus HBO for example. These levels of access are represented in the access rights that the terminals receive and furthermore in the decryption keys that are later generated from those access rights. Therefore Eyer discloses the "levels of access" as claimed.

2. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it would have been obvious to one of ordinary skill in the art at the time the

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invention was made to generate the cryptographic keys of Eyer using the modular exponentiation methods of Arazi in order to reduce overhead as disclosed in Arazi (Col. 11, lines 61-63).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 4, 6-12, 14, 15, 17, 18, 20, 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Eyer, U.S. Patent No. 5,485,577. Referring to claim 1, 2, 4, 6, 11, 12, 14, 15, 17, 18, 20, 21, Eyer discloses a method of accessing a plurality of television programs wherein access rights are received and divided into a plurality of subgroups. The subgroups are transmitted to the processor as authenticated data in a plurality of messages. A current cryptographic key is derived using the authenticated data contained in a current message upon receipt of that message by the processor (Col. 2, lines 19-25), which meets the limitation of receiving content comprising a set of attributes having L through N levels of access, where $L < N$, and content at a given level of access being decryptable by a corresponding key, receiving a base key corresponding to an M of N level of access, where $L \leq M \leq N$. Each television program, which represents a time slice from one service such as HBO, defines specific access requirements which must be present in order to grant the right to decrypt that program. A one-way function combines the program pre-key and access requirements to provide the program key necessary to generate working keys via a working key generator. The working key is applied as an initializing key to decrypt the digital data comprising the digital service being access

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controlled (Col. 5, lines 22-33), which meets the limitation of deriving lower level keys based on the base key, the lower level keys being used to access content having an M level of access or lower, additionally comprising receiving a D-dimensional matrix for each attribute in the set of attributes, wherein D corresponds to a number of attributes of the content and wherein the matrix comprises matrix values for determining how to generate a key corresponding to a given section of the content, and said deriving lower level keys based on the base key comprises using a function based on a matrix value corresponding to the lower level key and a one-way hash function of an adjacent higher level key.

Referring to claims 7-9, Eyer discloses that each television program, which represents a time slice from one service such as HBO, defines specific access requirements which must be present in order to grant the right to decrypt that program. A one-way function combines the program pre-key and access requirements to provide the program key necessary to generate working keys via a working key generator. The working key is applied as an initializing key to decrypt the digital data comprising the digital service being access controlled (Col. 5, lines 22-33), which meets the limitation of creating a hierarchy of keys, where each key is used to encrypt content having a set of attributes, and having one or more levels of access, and each key corresponds to a level of access, applying each of the keys to the content to create a plurality of sections of encrypted content, each section being a portion of the content, and each successive section of the content improving the set of attributes of the content, creating a D-dimensional matrix for each attribute in the set of attributes, wherein D corresponds to a number of attributes of the content and wherein the matrix comprises matrix values for determining how to generate a key corresponding to a given section of the content.

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Referring to claim 10, resolution is an inherent attribute of video data.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 3, 5, 13, 16, 19, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eyer, U.S. Patent No. 5,485,577, in view of Arazi, U.S. Patent No. 5,448,639. Referring to claims 3, 5, 13, 16, 19, 22, Eyer does not disclose that the key generation process uses modular exponentiation. Arazi discloses RSA key generation using modular exponentiation methods (Col. 11, lines 30-38). It would have been obvious to one of ordinary skill in the art at the time the invention was made to generate the cryptographic keys of Eyer using the modular exponentiation methods of Arazi in order to reduce overhead as disclosed in Arazi (Col. 11, lines 61-63).

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

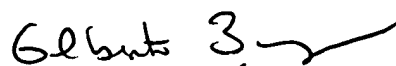
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin E. Lanier whose telephone number is 571-272-3805. The examiner can normally be reached on M-Th 7:30am-5:00pm, F 7:30am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Benjamin E. Lanier



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